

## Category #2 ER Hazmat

### 1. Base Requirement

Remote Location Multi-Gas Monitor w/ Photoionization Detector (PID)

RAE System AreaRae

Brand Name or Equivalent

- a. Detector
- b. Software/hardware
- c. Radio receiver
- d. Laptop

Vendor shall provide equipment that meets or exceeds the following minimum specifications for the base and optional items; line items 1 - 3.

1. Detect Volatile Organic Compounds (VOC) measured in parts per million (ppm)
2. Detect % Lower Exclusivity Limit (LEL)
3. Detect % Oxygen
4. Detect up to two electrochemical toxic sensors such as: Chlorine (Cl), Hydrogen Sulfide (H<sub>2</sub>S), Carbon Monoxide (CO), etc
5. Wireless radio frequency (RF) modem to transmit data & information in real-time using a remote base controller
6. Industry Scientific & Medical (ISM) unlicensed band technology RF transmitter with a range up to 2 miles.
7. Base controller software that works with a computer to monitor up to 16 individual remote multi-gas detectors at a time.
8. Direct readout: instantaneous values, sensor name, high and low values for all detectors, Time Weighted Averages (TWA) and Short Term Exposure Limits (STEL) values for toxic and VOCs, battery voltage and elapsed time.
9. Must be compact for easy transportability
10. Continuous wireless operation (AC power pack)
11. Alarm indicators: flashing red LED cluster to indicate exceeded preset limits, low battery or sensor failure.
12. Audible alarms: 100dB Buzzer at 10cm (typical)
13. Large LCD display
14. Large keypad
15. Weatherproof
16. Ruggedized
17. Ability to be used so that data can be tracked, displayed and mapped using Global Positioning Systems (GPS)
18. Must be able to be field mounted on tripods
19. Not more than 10 pounds with battery packs

## **1. Base Requirement (cont.)**

### **Power Requirements shall include the following:**

1. Rechargeable, 7.4V/4.5 Ah, lithium-ion battery pack with built in charger (less than 10 hours charge time)
2. C-cell Alkaline battery pack
3. 36 hours continuous stand-alone operation
4. 24 hours continuous wireless operation (lithium-ion battery)
5. 18 hours continuous wireless operation (Alkaline battery)

### **Monitor Requirements shall include the following:**

1. Monitor
2. Sensors
3. Carbon filters (for units with CO)
4. Calibration adapter
5. Quick reference guide
6. Operation and maintenance manual
7. Shoulder strap
8. Rechargeable Lithium-ion battery pack
9. 1120/240 VAC AC/DC Adapter
10. Spare Alkaline battery pack
11. Water-trap adapter
12. 10 Spare External Water trap filters
13. 5 Internal filters
14. Hard transport case with pre-cut foam
15. 15' (5M) Teflon tubing
16. Tool Kit

### **Other Requirements:**

1. Software for Windows 98, NT, 2000 and XP
2. Computer interface cable

## Technical specifications

Technical specifications shall meet or exceed the following:

SENSOR SPECIFICATIONS			
Gas Monitor	Range	Resolution	Response Time (T90)
Oxygen	0-30%	0.1%	15 Seconds
Combustible	0-100% LEL	1% LEL	15 Seconds
VOCs	0 - 200 ppm	0.1 ppm	10 Seconds
VOCs	200-2000 ppm	1 ppm	10 Seconds
Carbon Monoxide	0-500 ppm	1 ppm	20 Seconds
Hydrogen Sulfide	0-100 ppm	1 ppm	30 Seconds
Sulfur Dioxide	0-20 ppm	0.1 ppm	15 Seconds
Nitric Oxide	0-250 ppm	1 ppm	20 Seconds
Nitrogen Dioxide	0-20 ppm	0.1 ppm	25 Seconds
Chlorine	0-10 ppm	0.1 ppm	60 Seconds
Hydrogen Cyanide	0-100 ppm	1 ppm	60 Seconds
Ammonia	0-50 ppm	1 ppm	150 Seconds
Phosphine	0-5 ppm	0.1 ppm	60 Seconds

Data logging: 4000 points for each sensor with time stamp, serial number, user ID, site ID, location information (with GPS option)

Data Storage: 20,000 readings (64 hours, 5 channels at 1 minute intervals) in non-volatile memory

Data log Interval: Programmable 1-3600 sec

Communication: Upload data to PC and Download monitor setup from PC through RS-232 link to serial port on PC

## **Technical specifications (cont.)**

Intrinsic Safety: UL Classified for use in Class 1, Division II, Groups A, B, C and D

EM Immunity: No effect when exposed to 0.43 mW/cm<sup>2</sup> RF, interference (5 watt transmitter at 12 inch)

Calibration: Two-point field calibration for fresh air and standard reference gas

Sampling pump: Internal integrated diaphragm pump with programmable "High" (400cc) and "Low" (300cc) flow rate settings

Low Flow Alarm: Auto shut off pump at low flow condition

Temperature: -4° to 113° F (-20° to 45° C)

Humidity: 0% to 95% relative humidity (non-condensing)

### **2. Accessories:**

(Price Separately)

- A. Shoulder strap
- B. Optional tripod
- C. Wall mounting bracket

### **Optional Items:**

(Price Separately)

- A. Wireless real-time
- B. RF data transmission GPS
- C. Calibration Kit

Calibration Kit Requirements:

1. Calibration gas (kit may contain multiple cylinders depending on the sensors installed)
2. Calibration regulator and tubing (kit may contain a second regulation depending on the types of calibration gases included)

NOTE: Quotes shall include a complete price list of items and accessories related to the stated requirement for review. The submission of the price list does not obligate the government to purchase items from the vendor.

All items on this RFQ will be ordered on an as needed basis.